

WHAT IS CLAIMED IS:

1. A combined satellite and terrestrial antenna system for a structure, comprising:

a terrestrial antenna including a multi-band terrestrial antenna mounted on a mounting assembly including a low noise amplifier circuit and a bezel, wherein the bezel is adapted to contain the low noise amplifier;

a satellite antenna concentrically mounted with respect to the terrestrial antenna;

a satellite receiver; and

the mounting assembly connected to the satellite receiver for reception of satellite and satellite retransmitted signals by a satellite-terrestrial-retransmitted-satellite cable and an AM/FM receiver for reception of AM/FM terrestrial signals by a terrestrial AM/FM cable.

2. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein:

the satellite antenna is configured to receive SDARS signals.

3. The combined satellite and terrestrial antenna system for a structure, according to claim 2, wherein the satellite antenna comprises:

a quadrifilar helix antenna.

4. The combined satellite and terrestrial antenna system for a structure, according to claim 2, wherein the satellite antenna comprises:

a patch antenna.

5. The combined satellite and terrestrial antenna system for a structure, according to claim 2, wherein the satellite antenna comprises:

a loop antenna.

6. The combined satellite and terrestrial antenna system for a structure, according to claim 2, wherein the satellite antenna comprises:

a coupled-loop antenna.

7. The combined satellite and terrestrial antenna system for a structure according to claim 1, further comprising:

both the terrestrial antenna and satellite antenna mounted at a common location on the structure, such that the angle formed by the difference in height between the top of an obstruction and the height of the satellite antenna, and the distance from the obstruction and the combined concentrically mounted satellite and multiband terrestrial antenna is less than 20 degrees.

8. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the AM/FM receiver comprises:

a head unit; and
an AM/FM tuner.

9. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the low noise amplifier circuit comprises:

a satellite low noise amplifier with a first input connected to a first end of a satellite output, wherein the output of the low noise amplifier is the SDARS/SAT/TER cable

10. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the structure is selected from the group consisting of an automobile, a recreational vehicle, a house, a building, a train and an aircraft.

DP-309086
65899-0691

11. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the structure is a roof of an automobile.

12. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the structure is a fender of an automobile.

13. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein:

the satellite antenna is mounted on the uppermost portion of the terrestrial antenna.

14. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein:

the satellite antenna is mounted in a position lower than the terrestrial antenna.

15. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the terrestrial antenna is a retractable terrestrial antenna.

16. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the satellite and terrestrial antenna retract to a location within the structure.

17. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the combined satellite and terrestrial antenna retract to a location on the surface of the structure.

18. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the satellite antenna is mounted on the uppermost portion of the terrestrial antenna.

DP-309086
65899-0691

19. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the satellite antenna is mounted at any position on the terrestrial antenna.

20. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the terrestrial antenna is a retractable terrestrial antenna.

21. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the combined satellite and terrestrial antenna retract to a location within the structure.

22. The combined satellite and terrestrial antenna system for a structure according to claim 1, wherein the combined satellite and terrestrial antenna retract to a location on the surface of the structure.

23. A method for mounting a combined satellite and terrestrial antenna system on a structure comprising the following steps:

mounting a terrestrial antenna on a mounting assembly;

mounting the satellite antenna concentrically with the terrestrial antenna;

mounting the mounting assembly in a mounting hole on a structure, the mounting assembly comprising a low noise amplifier circuit and a bezel, the bezel adapted to contain the low noise amplifier;

locating satellite receiver hardware in proximity to the combined satellite and terrestrial antenna system; and

connecting the satellite antenna with a satellite-terrestrial-retransmitted-satellite cable for reception of satellite and satellite retransmitted signals

connecting the terrestrial antenna with an AM/FM cable for reception of AM/FM terrestrial signals.

DP-309086

65899-0691

24. The method for mounting a combined satellite and terrestrial antenna system on a structure according to claim 23, wherein the step of mounting the terrestrial antenna in a mounting hole and mounting the satellite antenna concentrically with the terrestrial antenna comprises:

mounting both the terrestrial antenna and satellite antenna mounted at a common location on the structure, such that the angle formed by the difference in height between the top of an obstruction and the height of the satellite antenna, and the distance from the obstruction and the combined concentrically mounted satellite and multiband terrestrial antenna is less than 20 degrees.

25. The method for mounting a combined satellite and terrestrial antenna system on a structure according to claim 23, wherein the structure is selected from the group consisting of an automobile, a recreational vehicle, a house, a building, a train and an aircraft.

26. The method for mounting a combined satellite and terrestrial antenna system on a structure according to claim 25, wherein the obstruction comprises:
a roof of the automobile.

27. The method for mounting a combined satellite and terrestrial antenna system on a structure according to claim 25, wherein the obstruction comprises:
a fender of the automobile.